Comparisons of Job Characteristics

Focus Occupation: Electrical and Electronic Engineering Technicians (17-3023)
Associated Occupation: Electro-Mechanical Technicians (17-3024)

Compare Knowledge
Compare Skills
Compare Abilities
Compare Detailed Work Activities
Compare Tools and Technologies

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 92

Focus Occupation: Electrical and Electronic Engineering Technicians (17-3023)
Associated Occupation: Electro-Mechanical Technicians (17-3024)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Computers and Electronics	8.4	16.1	15.8	0	Current knowledge level may be sufficient
Mathematics	9.2	16.0	11.2	<<	Extensive education and/or training may be required
Mechanical	6.8	15.6	11.6	<<	Extensive education and/or training may be required
Engineering and Technology	5.7	14.2	12.4	<	Expanded education and/or training may be required
Production and Processing	6.0	10.8	9.2	<	Expanded education and/or training may be required
Design	5.2	7.8	10.2	>>	Current knowledge level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 61

Focus Occupation: Electrical and Electronic Engineering Technicians (17-3023)
Associated Occupation: Electro-Mechanical Technicians (17-3024)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Operation Monitoring	6.6	13.9	9.4	<<	Extensive development of skills in this area may be required
Quality Control Analysis	5.9	12.9	8.8	<<	Extensive development of skills in this area may be required
Troubleshooting	4.5	12.8	8.8	<<	Extensive development of skills in this area may be required
Repairing	3.4	12.3	8.0	<<	Extensive development of skills in this area may be required

Equipment Maintenance	3.5	10.8	7.9	<<	Extensive development of skills in this area may be required
Operation and Control	5.4	10.5	6.8	<<	Extensive development of skills in this area may be required
Installation	1.7	10.2	3.3	<<	Extensive development of skills in this area may be required
Equipment Selection	3.3	9.2	7.0	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 86

Focus Occupation: Electrical and Electronic Engineering Technicians (17-3023)
Associated Occupation: Electro-Mechanical Technicians (17-3024)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Near Vision	11.1	13.5	11.6	<	Some improvement in abilities may be required
Finger Dexterity	7.6	12.5	9.9	<	Some improvement in abilities may be required
Control Precision	6.6	12.1	7.9	<<	Extensive improvement in abilities may be required
Arm-Hand Steadiness	6.8	12.0	8.8	<<	Extensive improvement in abilities may be required
Manual Dexterity	6.5	11.6	8.4	<<	Extensive improvement in abilities may be required
Far Vision	7.8	11.5	7.4	<<	Extensive improvement in abilities may be required
Selective Attention	8.7	11.4	9.0	<	Some improvement in abilities may be required
Perceptual Speed	7.4	11.2	7.5	<<	Extensive improvement in abilities may be required
Visual Color Discrimination	6.4	10.6	9.6	<	Some improvement in abilities may be required
Auditory Attention	5.9	10.3	5.5	<<	Extensive improvement in abilities may be required
Reaction Time	4.8	10.3	3.8	<<	Extensive improvement in abilities may be required
Hearing Sensitivity	5.6	9.8	6.5	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 94

Focus Occupation: Electrical and Electronic Engineering Technicians (17-3023)
Associated Occupation: Electro-Mechanical Technicians (17-3024)

Work Activities	Exclusivity of Activity
Analyze technical data, designs, or preliminary specifications	47
Analyze test data	64
Calculate engineering specifications	64
Communicate technical information	4
Develop plans for programs or projects	31
Evaluate engineering data	60
Examine engineering documents for completeness or accuracy	62
Fabricate, assemble, or disassemble manufactured products by hand	11
Inspect facilities or equipment for regulatory compliance	51
Install electronic equipment, components, or systems	62
Install/connect electrical equipment to power circuit	57
Modify electrical or electronic equipment or products	74
Operate precision test equipment	81
Prepare technical reports or related documentation	22
Read blueprints	10
Read manufacturing outlines for electronic products	84
Read schematics	34
Read technical drawings	7
Repair or replace electrical wiring, circuits, fixtures, or equipment	49
Set up and operate variety of machine tools	62
Solder electrical or electronic connections or components	55
Test equipment as part of engineering projects or processes	67
Understand engineering data or reports	48
Understand service or repair manuals	40
Understand technical operating, service or repair manuals	6
Use electrical or electronic test devices or equipment	40
Use hand or power tools	2
Use knowledge of metric system	39
Use oscilloscopes in electronics repair	77
Use precision measuring tools or equipment	17
Use scientific research methodology	21
Use technical information in manufacturing or industrial activities	67
Use technical regulations for engineering problems	61

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 82

Focus Occupation: Electrical and Electronic Engineering Technicians (17-3023)
Associated Occupation: Electro-Mechanical Technicians (17-3024)

Tools and Technologies	Exclusivity
Business function specific software	1

Cameras	2
Computer data input devices	2
Computer printers	2
Computers	1
Content authoring and editing software	1
Cutting and crimping and punching tools	3
Data management and query software	1
Development software	4
Electrical measuring and testing equipment	7
Electronic and communication measuring and testing instruments	14
Holding and clamping tools	3
Indicating and recording instruments	2
Industry specific software	1
Integrated circuits	18
Light and wave generating and measuring equipment	4
Machine tools	7
Operating environment software	12
Power tools	2
Soldering and brazing and welding machinery and supplies	6
Viewing and observing instruments and accessories	4
Vision protection and accessories	3
Wrenches and drivers	2

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.